

4 ace50 a20'-2 e0 a20'-12 kd1 a20') (2 e0'-9 e0' a20 + 12 e0 a20'-4 a20') + 36 kd1 (4 ace50'-5 ace50 e0 + 2 e0'-2 ace50 kd1+4 e0 kd1-2 kd1'-4 ace50 a20+2 e0 a20+6 kd1 a20)

144 (2 ace50 - e0 - 2 kd1) kd1 (-4 ace50 e0 + 6 ace50 e0 ' - 2 e0' + 6 ace50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 ' + 8 ace50' s20 - 14 ace50 e0 s20 + 5 e0' s20 + 2 e0 kd1 s20 + 4 kd1 s20 +

108 kdl² (4 ace 50′ - 5 ace 50 e 0 + 2 e 0² - 2 ace 50 kdl + 4 e 0 kdl - 2 kdl² - 4 ace 50 a20 + 2 e 0 320 + 6 kdl a20)² (2 e 0² - 9 e 0² a20 + 12 e 0 320² - 4 320²) -

(-4 ace50 to + 6 ace50 e0 t - 2 eo 2 + 6 ace50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 to 8 ace50 to 820 - 14 ace50 e0 s20 + 5 e0 to 820 + 4 kd1 to 820 + 4 ace50 s20 to 8 e0 s20 to 8 ace50 s20 to

(2 (-4 ace50° e0 +6 ace50 e0° - 2 e0² + 6 ace50 e0 kd1 - 4 e0² kd1 + 10 e0 kd1² +8 ace50° 320 - 14 ace50 e0 320 + 5 e0² 320 + 2 e0 kd1 s20 + 4 kd1° 320 + 4 ace50 320° - 2 e0 320° - 12 kd1 320°)² +

((-4 ace 50 to +6 ace 50 e0 to 2 e0 to 6 ace 50 e0 kd1 - 4 e0 to 4 to 10 e0 kd1 + 8 ace 50 to 20 - 14 ace 50 e0 to 20 + 5 e0 to 20 + 2 e0 kd1 s20 + 4 kd1 to 20 + 4 ace 50 s20 to 2 e0 s20 to 2 kd1 s20 to 3 e0 to 3 e (-4 aces0'e0 +6 aces0 e0'-2 e0'+6 aces0 e0 kd1 - 4 e0'kd1 + 10 e0 kd1'+8 aces0's20 - 14 aces0 e0 320 +5 e0's20 +2 e0 kd1 s20 +4 kd1's20 +4 aces0 s20'-2 e0 s20'-12 kd1 s20')

24 (2 ace 50 - e0 - 2 kd1) kd1 (2 e0 3 - 9 e0 3 20 + 12 e0 3 20 4 - 4 3 20 3) + 12 kd1 (4 ace 50 * - 5 ace 50 e0 + 2 e0 * - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1* - 4 ace 50 3 20 + 2 e0 3 20 + 6 kd1 s 20)

(ace50 e0+ 4 e0* kd1 - ace50 e0 920 - 2 e0* 920 - 7 e0 kd1 920 - 2 ace50 920* + 5 e0 920* - 2 kd1 920* - 2 920*)) / (3 2**) (2 ace50 - 60 - 2 kd1)

2 e0 s20' - 12 kd1 s20') + 108 kd1' (4 ace 50' - 5 ace 50 e0 + 2 e0' - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1' - 4 ace 50 s20 + 2 e0 s20 + 6 kd1 s20) (2 e0' - 9 e0' s20 + 12 e0 s20' - 4 s20') -

2 e0 s20' - 12 kd1 s20') ' + 24 (2 ace 50 - e0 - 2 kd1) kd1' (2 e0' - 9 e0' s20 + 12 e0 s20' - 4 s20') + 12 kd1 (4 ace 50' - 5 ace 50 e0 + 2 e0' - 2 ace 50 kd1 + 4 e0 kd1 -

216 (2 ace 50 - e0 - 2 kd1) kd1 (ace 50 e0 + 4 e0 kd1 - ace 50 e0 s20 - 2 e0 s20 - 7 e0 kd1 s20 - 2 ace 50 s20 + 5 e0 s20 * - 2 kd1 s20 * - 2 s20 *) *

(ace50 e0' + 4 e0' kd1 - ace50 e0 a20 - 2 e0' s20 - 7 e0 kd1 s20 - 2 ace50 s20' + 5 e0 s20' - 2 kd1 s20' - 2 s20') +

2 kd1 f - 4 ace 50 s 20 + 2 e 0 s 20 + 6 kd1 s 20) (ace 50 e 0 f + 4 e 0 f kd1 - ace 50 e 0 s 20 - 2 e 0 f s 20 - 7 e 0 kd1 s 20 - 2 ace 50 s 20 f + 5 e 0 s 20 f - 2 kd1 s 20 f - 2 s 20 f))

(2 (-4 ace 50 * e 0 + 6 ace 50 e 0 * + 6 ace 50 e 0 * dd - 4 e 0 * kd + 10 e 0 kd 1 * + 8 ace 50 * 520 - 14 ace 50 e 0 s 20 + 5 e 0 * s 20 + 2 e 0 kd 1 s 20 + 4 kd 1 * s 20 + 4 ace 50 a 20 *

4/31 4 ace50 820' - 2 e0 820' - 12 kd1 920') (ace50 e0' + 4 e0' kd1 - ace50 e0 920 - 2 e0' 920 - 7 e0 kd1 820 - 2 ace50 920' + 5 e0 920' - 2 kd1 820' - 2 s20') + 216 (2 ace50 - e0 - 2 kd1) 4kd1's20,4 ace 50 s20' - 2 e 0 s20' - 12 kd1 s20') (2 e 0' - 9 e 0' s20 + 12 e 0 s20' - 4 s20') + 36 kd1 (4 ace 50' - 5 ace 50 e 0 + 2 e 0' - 2 ace 50 kd1 + 4 e 0 kd1 - 2 kd1' - 4 ace 50 s 20 + 2 e0 kd1 920 + 4kd1° 920 + 4 ace 50 820° - 2 e0 820° - 12 kd1 820°) (2 e0° - 9 e0° 820 + 12 e0 820° - 4 820°) + 36 kd1 (4 ace 50° - 5 ace 50 e0 + 2 e0° - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1° -(-4 aceso' e0 +6 aceso e0' - 2 e0' + 6 aceso e0 kd1 - 4 e0' kd1 + 10 e0 kd1 + 8 aceso' s20 - 14 aceso e0 s20 + 5 e0' 820 + 2 e0 kd1 920 + 4 kd1' 520 + 4 aceso 820' - 2 e0 s20' - 12 kd1 s20') 2 e0 s20' - 12 kd1 s20') + 108 kd1' (4 ace50' - 5 ace50 e0 + 2 e0' - 2 ace50 kd1 + 4 e0 kd1 - 2 kd1' - 4 ace50 s20 + 2 e0 s20 + 6 kd1 s20) (2 e0' - 9 e0' s20 + 12 e0 s20' - 4 s20') ((z (-4 aces0° e0 + 6 aces0 e0² + 6 aces0 e0 kd1 - 4 e0° kd1 + 10 e0 kd1² + 8 aces0³ s20 - 14 aces0 e0 s20 + 5 e0³ s20 + 2 e0 kd1 s20 + 4 kd1³ s20 + 4 aces0 s20° - 2 e0 s20³ - 12 kd1 s20³) (-4 ace 50° e0 +6 ace 50 e0° - 2 e0° + 6 ace 50 e0 kd1 - 4 e0° kd1 + 10 e0 kd1 * +8 ace 50° 320 - 14 ace 50 e0 320 + 5 e0 kd1 320 + 4 kd1° 320 + 4 ace 50 320° - 2 e0 320° - 12 kd1 a20°) 108 kd1 (4 ace 50 - 5 ace 50 e0 + 2 e0 - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 - 2 kd1 - 2 kd1 s20 + 6 kd1 s20) (2 e0 2 - 9 e0 320 + 12 e0 s20 - 4 s20 2) - 144 (2 ace 50 - 60 - 2 kd1) kd1 4 4 ace50 320+ 2 e0 320+ 6 kd1 320) (-4 ace50 e 0+ 6 ace50 e 01 - 2 e 01 + 6 ace50 e 0 kd1 - 4 e 0 kd1 + 10 e 0 kd1 * 8 ace50 * 320 - 14 ace50 e 0 320 + 5 e 0 * 320 + 2 e 0 kd1 320 2 e0 320 + 6 kd1 s20) (-4 nce 50 t e0 + 6 nce 50 e0 t - 2 e0 t + 6 nce 50 e0 kd1 - 4 e0 t kd1 + 10 e0 kd1 t + 8 nce 50 t 320 - 14 nce 50 e0 s20 + 5 e0 t s20 + 2 e0 kd1 s20 + 4 kd1 t s20 4xd1 1320 + 4 ace 50 320 1 - 2 e0 320 1 - 12 kd1 320 1) (ace 50 e0 1 + 4 e0 1 kd1 - ace 50 e0 320 - 2 e0 320 - 2 ace 50 320 1 - 2 e0 320 1 - 2 ace 50 320 1 - 2 ace 50 320 1 - 2 ace 50 320 1 + 5 e0 320 1 - 2 ace 50 320 1 + 5 e0 320 1 - 2 ace 50 320 1 + 5 e0 320 1 - 2 ace 50 320 1 + 5 e0 320 1 - 2 ace 50 320 1 + 5 e0 144 (2 ace 50 - e0 - 2 kd1) kd1² (-4 ace 50² e0 + 6 ace 50 e0² - 6 ace 50 e0 kd1 - 4 e0² kd1 + 10 e0 kd1² + 8 ace 50⁵ a20 - 14 ace 50 e0 a20 + 5 e0³ + 5 e0 kd1 a 20 2 e0 920' - 12 kdl 820') ' + 24 (2 ace50 - e0 - 2 kdl) kdl' (2 e0' - 9 e0' 920 + 12 e0 920' - 4 920') + 12 kdl (4 ace50' - 5 ace50 e0 + 2 e0' - 2 ace50 kdl + 4 e0 kdl /-4 (-4 ace 50 to +6 ace 50 e0 to - 2 e0 to 6 ace 50 e0 kd1 - 4 e0 to 4 to 10 e0 kd1 to 8 ace 50 to - 14 ace 50 e0 s20 + 5 e0 to 8 e0 to 20 + 4 kd1 s20 + 4 ace 50 s20 to 6 2 kd1 - 4 ace 50 a 20 + 2 e 0 a 20 + 6 kd1 s 20) (ace 50 e 0 * 4 de 0 * kd1 - ace 50 e 0 a 20 - 2 e 0 * 80 a 20 * 5 e 0 a 20 * - 2 kd1 s 20 * - 2 a 20 3) (2 (-4 scc 50 º 6 o cc 50 c 6 ° - 2 c 6 ° + 6 acc 50 c 6 kd - 4 c 6 ° kd 1 + 10 c 6 kd 1 * 9 acc 50 ° 320 - 14 scc 50 c 6 320 + 5 c 6 ° 320 + 2 c 6 kd 1 320 + 4 kd 1 ° 320 + 4 acc 50 320 ° kd1' (ace50 e0' + 4 e0' kd1 - ace50 e0 s20 - 2 e0' s20 - 7 e0 kd1 s20 - 2 ace50 s20' + 5 e0 s20' - 2 kd1 s20' - 2 s20') () 1/) + 6 21/; (2 ace50 - 60 - 2 kd1) 144 (2 ace50 - e0 - 2 kd1) kd1 (-4 ace50 t0 + 6 ace50 t0' - 2 t0' + 6 ace50 t0 kd1 - 4 t0' kd1 + 10 t0 kd1 + 8 ace50' a20 - 14 ace50 t0 a20 + 5 t ' a20 + 216 (2 ace 50 - ea - 2 kal) kal (ace 50 eb² + 4 eb² kal - ace 50 e0 s20 - 2 eo² s20 - 7 e0 kal s20 - 2 ace 50 s20² + 5 e0 s20² - 2 kal s20² - 2 s20²) t] t] table (2 eo' - 9 eo' 920 + 12 eo 820² - 4 820²) + 36 kd1 (4 8ce50² - 5 8ce50 eo + 2 eo' - 2 8ce50 Wd1 + 4 eo kd1 - 2 kd1² - 4 8ce50 820 + 2 eo 920 + 6 kd1 820) 216 (2 ace50 - e0 - 2 kd1) kd1 (ace50 e0 + 4 e0 kd1 - ace50 e0 520 - 2 e0 520 - 7 e0 kd1 s20 - 2 ace50 s20 + 5 e0 s20 - 2 kd1 s20 - 2 s20 3) + (ace50 e0' + 4 e0' kd1 - ace50 e0 s20 - 2 e0' s20 - 7 e0 kd1 s20 - 2 ace50 s20' + 5 e0 s20' - 2 kd1 s20' - 2 s20') +

(-4 ace50 + 5 ace50 e0 - 2 e0 + 2 ace50 kd1 - 4 e0 kd1 + 2 kd1 + 4 ace50 s20 - 2 e0 s20 - 6 kd1 s20) 1/(2 (2 ace50 - e0 - 2 kd1) 1) -

3 - 6 kd1 s20) 1 / (2 (2 sce 50 - e0 - 2 kd1) 1) -

1 / (-4 aces0² + 5 aces0 e0 - 2 e0² + 2 aces0 kd1 - 4 e0 kd1 + 2 kd1² + 4 aces0 920 - 2 e0 920 - 6 kd1 920)² / (4 (2 aces0 - e0 - 2 kd1)²) - 3 (2 aces0 - e0 - 2 kd1)² rd2 = - (-4 ace50* + 5 ace50 e0 - 2 e0* + 2 ace50 kd1 - 4 e0 kd1 + 2 kd1* + 4 ace50 a20 - 2 e0 a20 - 6 kd1 s20) / (4 (2 ace50 - e0 - 2 kd1)) +

2 e0 s20t-12 kd1 s201) + 108 kd1 (4 ace 50t-5 ace 50 e0 + 2 e0t-2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 - 4 ace 50 s20 + 2 e0 s20 + 6 kd1 s20) (2 e0t-9 e0t s20 + 12 e0 s20t-4 s20t) 2 e0 Md 3 220 + 4 kd1 2 320 4 4 ace 50 3 20 2 - 2 e 0 3 20 2 - 1 2 Kd 1 3 20 7 (2 e0 - 9 e0 3 50 4 1 2 e0 3 20 4 - 4 3 20 7) + 36 Kd 1 (4 ace 50 2 ace 50 e0 + 2 e0 2 - 2 ace 50 Kd 1 + 4 e0 Kd 1 - 2 kd 1 - 2 (2 (-4 ace 50° e0 +6 ace 50 e0° - 2 e0° + 6 ace 50 e0 kd1 - 4 e0° kd1 + 10 e0 kd1 + 8 ace 50° 520 - 14 ace 50 e0 a20 + 5 e0° 320 + 2 e0 kd1 s20 + 4 kd1 s20 + 4 ace 50 a 20° - 2 e0 s 20° - 12 kd1 s 20°) (-4 ace50° e0 +6 ace50 e0° - 2 e0° + 6 ace50 e0 kd1 - 4 e0° kd1 + 10 e0 kd1° +8 ace50° 320 - 14 ace50 e0 320 + 5 e0° 320 + 2 e0 kd1 s20 + 4 kd1° 320 + 4 ace50 s20° - 2 e0 320° - 12 kd1 320° | (-4 ace50 e0 + 6 ace50 e0 + 6 ace50 e0 kd1 - 4 eo'kd1 + 10 e0 kd1 + 8 ace50 s20 - 14 ace50 e0 s20 + 5 e0 s20 + 2 e0 kd1 s20 + 4 kd1 320 + 4 ace50 s20 - 2 e0 s20 * - 12 kd1 s20 * 108 kdl (4 ace50' - 5 ace50 eD + 2 e0' - 2 ace50 kdl + 4 e0 kdl - 2 kdl' - 4 ace50 s20 + 2 e0 s20 + 6 kdl s20) (2 e0' - 9 e0' s20 + 12 e0 s20' - 4 s20') - 144 (2 ace50 - e0 - 2 kdl) kdl' 4 ace50 s20 + 2 e0 s20 + 6 kd1 s20) (-4 ace50 e0 + 6 ace50 e0 f - 2 e0 f + 6 ace50 e0 kd1 - 4 e0 f kd1 + 10 e0 kd1 + 8 ace50 f s20 - 14 ace50 e0 s20 + 5 e0 f s20 + 2 e0 kd1 s20 4 kd1 s20 + 4 ace 50 s20 1 - 2 e0 s20 1 - 12 kd1 s20 1) (ace 50 e0 1 + 4 e0 1 kd1 - ace 50 e0 s20 - 2 e0 1 s20 - 7 e0 kd1 s20 - 2 ace 50 s20 1 + 5 e0 s20 1 - 2 kd1 s20 1 - 2 s20 1) 2 e0 s20¹-12 kd1 s20¹)¹+24 (2 ace50 - e0 - 2 kd1) kd1² (2 e0³-9 e0¹ s20+12 e0 s20¹ - 4 s20¹) +12 kd1 (4 ace50ª - 5 ace50 e0 + 2 e0² - 2 ace50 kd1 + 4 e0 kd1 -√ (-4 € (-4 ace 50 e 0 + 6 ace 50 e 0 f - 6 ace 50 e 0 kd1 - 4 e 0 kd1 + 10 e 0 kd1 f - 8 ace 50 f 320 - 14 ace 50 e 0 s20 + 5 e 0 f s20 + 2 e 0 kd1 s20 + 4 kd1 f a20 + 4 ace 50 s20 f 2 kd1² - 4 ace 50 a20 + 2 e0 a20 + 6 kd1 s20) (ace 50 e0² + 4 e0² kd1 - ace 50 e0 a20 - 2 e0³ a20 - 7 e0 kd1 s20 - 2 ace 50 a20³ + 5 e0 s20² - 2 kd1 a20⁴ - 2 s20²))² (2 (-4 ace 50 a ce 50 ace 50 a 144 (2 ace50 - e0 - 2 kdl) kdl* (-4 ace50* e0 + 6 ace50 e0* - 2 e0* +6 ace50 e0 kdl - 4 e0* kdl + 10 e0 kdl* +9 ace50* 320 - 14 ace50 e0 320 + 5 e0* 320 + 216 (2 ace50 - e0 - 2 kd1) kd1 (ace50 e0 + 4 e0 kd1 - ace50 e0 520 - 2 e0 520 - 7 e0 kd1 520 - 2 ace50 520 + 3 e0 520 - 2 5 kd1 520 - 2 520 7 1 1 1 1 1 1 1 1 (2 eg' - 9 eg' 320 + 12 eg 320' - 4 320') + 36 kdi (4 ace 50' - 5 ace 50 eg + 2 eg' - 2 ace 50 kdi + 4 eg kdi - 2 kdi' - 4 ace 50 a20 + 2 eg a20 + 6 kdi 320) 216 (2 ace 50 - eD - 2 kd1) kd1 (ace 50 eO + 4 eO kd1 - ace 50 eO 520 - 2 eO 520 - 7 eO kd1 520 - 2 ace 50 520 + 5 eO 520 + 2 kd1 520 + 2 520 t) + (ace50 e0* + 4 e0* kd1 - ace50 e0 s20 - 2 e0* s20 - 7 e0 kd1 s20 - 2 ace50 s20* + 5 e0 s20* - 2 kd1 s20* - 2 a20*) +

4 ace50 s20' - 2 e0 s20' - 12 kd1 s20') (2 e0' - 9 e0' s20 + 12 e0 s20' - 4 s20') + 36 kd1 (4 ace50' - 5 ace50 e0 + 2 e0' - 2 ace50 kd1 + 4 e0 kd1 - 2 kd1' - 9 ace50 s20 + 2 e0 s20 + 6 kd1 s20) (2 (-4 ace 50° e0 + 6 ace 50 e0 ace 50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 + 8 ace 50 s20 - 14 ace 50 e0 s20 + 5 e0 s20 + 2 e0 kd1 as0 + 4 kd1 s20 + 4 ace 50 as0 - 2 e0 s20 - 12 kd1 as0 s2 -2 e0 s201 - 12 kd1 s201) + 108 kd1 (4 ace 50 - 5 ace 50 e0 + 2 e0 1 - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 (-4 ace50 te0 + 6 ace50 e0 tel - 2 e0 te50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 te0 ace50 tel xd0 + 8 ace50 te0 testo 20 - 14 ace50 e0 s20 tel x20 + 2 kd1 s20 + 4 kd1 s20 + 4 ace50 s20 tel 4 3 T C 5 5 5 5 1 - 2 E 0 5 2 0 1 2 1 2 1 4 1 5 2 0 1 (ace 5 0 e 0 4 4 e 0 4 1 1 - ace 5 0 e 0 2 2 0 - 2 e 0 3 2 0 - 7 e 0 1 4 1 5 2 0 - 2 ace 5 0 3 2 0 7 + 5 e 0 3 2 0 7 - 2 1 4 1 1 5 2 0 1 3 2 0 1 + 2 1 6 (2 ace 5 0 - 6 0 - 2 1 4 1) 4 kd1 300 + 4 ace 50 920 - 2 e0 920 - 12 kd1 920) (2 e0 3 - 9 e0 5 20 + 12 e0 820 - 4 820 3) + 36 kd1 (4 ace 50 e0 + 2 e0 5 - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 - 4 ace 50 920 + (-4 ace50 t0 + 6 ace50 e0 t - 2 e0 t + 6 ace50 e0 kdl - 10 e0 kdl + 10 e0 kdl + 8 ace50 t 520 - 14 ace50 e0 t0 t 520 + 2 e0 kdl s20 + 4 kdl s20 + 4 ace50 s20t - 2 e0 s20t - 12 kdl s20t) 144 (2 ace50 - ED - 2 kd1) kd1 (-4 ace50 eO + 6 ace50 eO + - 2 eD * + 6 ace50 eO kd1 - 4 eD * kd1 + 10 eO kd1 * + 8 ace50 * 520 - 14 ace50 eO s20 + 5 eO * 320 + 2 eO kd1 s20 + 4 kd1 * s20 + 2 e0 320 + 6 kdl 320) (-4 ace50 e0 + 6 ace50 e0 * d - 2 e0 * + 6 ace50 e0 kdl - 4 e0 * kdl * 10 e0 kdl * 8 ace50 * 320 - 14 ace50 e0 820 + 5 e0 * 520 + 2 e0 kdl 520 + 4 kdl * 520 144 (2 ace 50 - e0 - 2 kd1) kd1 t (-4 ace 50 e0 + 6 ace 50 e0 t - 2 e0 t + 6 ace 50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 t + 8 ace 50 t ace 50 e0 s 20 + 5 e0 s ace 50 e0 2 e0 s20° - 12 kd1 s20°)° + 24 (2 ace50 - e0 - 2 kd1) kd1° (2 e0° - 9 e0° s20 + 12 e0 s20° - 4 s20°) + 12 kd1 (4 ace50° - 5 ace50 e0 + 2 e0° - 2 ace50 kd1 + 4 e : kd1 2 kd1² - 4 sce50 820 + 2 e0 s20 + 6 kd1 s20) (ace50 e0¹ + 4 e0¹ kd1 - sce50 e0 s20 - 2 e0¹ s20 - 7 e0 kd1 s20 - 2 sce50 s20² + 5 e0 s20² - 2 kd1 s20⁴ - 2 s20³)] . + √{-4{(-4 ace50° e0 +6 ace50 e0¹ - 2 e0³ + 6 ace50 e0 kd1 - 4 e0¹ kd1 + 10 e0 kd1² + 8 ace50³ s20 - 14 ace50 e0 s20 + 5 e0² s20 + 2 e0 kd1 s20 + 4 kd1² s20 + 4 ace50 s20¹ -(2 (-4 ace50° e0 + 6 ace50 e0 1 - 2 e0 3 + 6 ace50 e0 kd1 - 4 e0 4 kd1 + 10 e0 kd1 4 8 ace50 320 - 14 ace50 e0 320 + 5 e0 4 320 + 2 e0 kd1 320 + 4 kd1 320 + 4 ace50 320 4 108 kd1* (4 ace 50° - 5 ace 50 e0 + 2 e0° - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1* - 4 ace 50 s 20 + 2 e0 s 20 + 6 kd1 s 20)* (2 e0* - 9 e0* s 20 + 12 e0 s 20* - 4 s 20*) -216 (2 ace50 - eD - 2 kd1) kd1 (ace50 e0' + 4 e0' kd1 - ace50 e0 320 - 2 e0' 320 - 7 e0 kdi 320 - 2 ace50 320' + 5 e0 920' - 2 kd1 920' - 2 320') '+ [ace50 e0[‡] + 4 e0[‡]kd1 – ace50 e0 s20 – 2 e0[‡] s20 – 7 e0 kd1 s20 – 2 ace50 s20[‡] + 5 e0 s20[‡] – 2 kd1 s20[‡] - 2 s20[‡]) } / (3 2^{1,12} (2 ace50 – e0 – 2 kd1) (ace50 eo' + 4 eo' kd1 - ace50 eo 320 - 2 eo' 320 - 7 eo kd1 320 - 2 ace50 320² + 5 eo 320² - 2 kd1 320² - 2 520²) 12 kd1 (4 ace50 i - 5 ace50 e0 + 2 e0 i - 2 ace50 kd1 + 4 e0 kd1 - 2 kd1 i - 4 ace50 s20 + 2 e0 s20 + 6 kd1 s20) 24 (2 ace50 - e0 - 2 kd1) kd1 (2 e0 - 9 e0 320 + 12 e0 s20 * - 4 s20) +

3 (2 ace50 - e0 - 2 kd1)

(2 (-4 ace50 e0 + 6 ace50 e0 - 2 e0 + 6 ace50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 + 8 ace50 a20 - 14 ace50 e0 s20 + 5 e0 s20 + 2 e0 kd1 s20 + 4 kd1 s20 + 4 ace50 s20 - 2 e0 s20 - 12 kd1 a20 f)

6/31 kd1* - 4 ace 50 s20 + 2 e0 s20 + 6 kd1 s20) (-4 ace 50* e0 + 6 ace 50 e0* - 2 e0* + 6 ace 50 kd1 - 4 e0* kd1 + 10 e0 kd1 * + 8 ace 50* 520 - 14 ace 50 e0 s20 + 5 e0* s20 + 2 e0 kd1 2 e D kd1 320 + 4 kd1° 320 + 4 sce 50 320° - 2 e 0 320° - 12 kd1 320°) (2 e 0° - 9 e 0° 320 + 12 e 0 320° - 4 320°) + 36 kd1 (4 sce 50° - 5 sce 50 e 0 + 2 e 0° - 2 sce 50 kd1 + 4 e 0 kd1 - 2 2 kd1 1 - 4 ace 50 s20 + 2 e D s20 + 6 kd1 s20) (-4 ace 50 e 0 + 6 ace 50 e 0 kd1 - 4 e 0 kd1 + 10 e 0 kd1 + 8 ace 50 9 20 - 14 ace 50 e 0 s20 + 5 e 0 kd1 2 e0 kd1 320 + 4 kd1 ' 320 + 4 ace 50 320 * - 2 e 0 320 * - 12 kd1 320 * (ace 50 e0 * + 4 e0 * kd1 - ace 50 e0 a 20 - 2 e0 a 20 - 2 ace 50 320 * + 5 e0 320 * - 2 kd1 320 * - 2 320 *) + 320+4kd1 320+4ace50 320' - 2 e0 320' - 12 kd1 320') (ace50 e0' + 4 e0' kd1 - ace50 e0 320 - 2 e0' 320 - 7 e0 kd1 320 - 2 ace50 320' + 5 e0 320' - 2 kd1 320' - 2 320') + (2 eD - 9 eO 520 + 12 eD 520' - 4 82D') - 144 (2 ace 50 - eO - 2 hd1) kd1' (-4 ace 50 eO + 6 ace 50 eO + 5 ace 50 eO hd1 - 4 eD' hd1 + 10 eO hd1' + 8 ace 50 e 50 = 14 ace 50 eO s2D 2 e0 kd1 s20 + 4 kd1 * s20 + 4 sce 50 s20 * - 2 e0 s20 * - 12 kd1 s20 *) (sce 50 e0 * + 4 e0 * kd1 - ace 50 e0 s20 - 2 e0 * 320 - 7 e0 kd1 s20 - 2 ace 50 s20 * + 5 e0 s20 * - 2 kd1 s20 * - 2 s20 *) 2 e0 kd1 s20 + 4 kd1 s20 + 4 bce50 s20 f - 2 e0 s20 f - 12 kd1 s20 f) (2 e0 f - 9 e0 f s20 + 12 e0 s20 f - 4 s20 f) + 36 kd1 (4 bce50 f - 5 bce50 e0 + 2 e0 f - 2 bce50 kd1 + 4 e0 kd1 -J(-4 ((-4 ace 50 * 0 + 6 ace 50 e0 * - 2 e0 * + 6 ace 50 e0 xd1 - 4 e0 * xd1 + 10 e0 xd1 * + 8 ace 50 * 20 - 14 ace 50 e0 920 + 5 e0 * 320 + 2 e0 xd1 320 + 4 xd1 * 320 + 4 ace 50 320 * - 2 e0 320 * /-4 (-4 ace 50 ° e0 + 6 ace 50 e0 ° + 6 ace 50 e0 kd1 - 4 e0 ° kd1 + 10 e0 kd1 ° + 8 ace 50 - 14 ace 50 e0 s20 + 5 e0 ° 820 + 2 e0 kd1 s20 + 4 kd1 s20 + 4 ace 50 820 ° - 2 e0 s20 ° 2 e0 320* - 12 kd1 920') * + 108 kd1* (4 ace50* - 5 ace50 e0 + 2 e0* - 2 ace50 kd1 + 4 e0 kd1 - 2 kd1* - 4 ace50 320 + 2 e0 320 + 6 kd1 920) * (2 e0* - 9 e0* 320 + 12 e0 320* (2 (-4 ace 50° e0 + 6 ace 50 e0° - 2 e0° + 6 ace 50 e0 kd1 - 4 e0° kd1 + 10 e0 kd1 * + 8 ace 50° 320 - 14 ace 50 e0 320 + 5 e0° 620 + 2 e0 kd1 320 + 4 kd1° 320 + 4 ace 50 320° - 2 e0 320° 4 e0 kd1 - 2 kd1² - 4 ace50 920 + 2 e0 920 + 6 kd1 920) (-4 ace50² e0 + 6 ace50 e0² + 5 ace50 e0 kd1 - 4 e0² kd1 + 10 e0 kd1² + 8 ace50² 920 - 14 ace50 e0 920 + 5 e0² 920 12 kd1 s20', '+ 108 kd1" (4 sce 50' - 5 sce 50 e0 + 2 e0' - 2 sce 50 kd1 + 4 e0 kd1 - 2 kd1' - 4 sce 50 s20 + 2 e0 s20 + 6 kd1 s20) ' (2 e0' - 9 e0' s20 + 12 e0 s20' - 4 s20') -5 e0' \$20 + 2 e0 kd1 \$20 + 4 kd1 820 + 4 ace \$50 \$20' - 2 e0 \$20' - 12 kd1 \$20') (2 e0' - 9 e0' 620 + 12 e0 \$20' - 4 \$20') + 36 kd1 (4 ace \$50' - 5 ace \$50 e0 + 2 e0' - 2 ace \$50 kd1 + 1920') - 144 (2 ace 50 - 2 hd.) hd.1' (-4 ace 50 e 0 + 6 ace 50 e 0' - 2 e 0' + 6 ace 50 e 0 hd. - 4 e 0' hd. + 10 e 0 hd.1' + 8 ace 50' 920 - 14 ace 50 e 0 820 + 5 e 0' 920 12 kd1 320') + 24 (2 ace 50 - e0 - 2 kd1) kd1' (2 e0' - 9 e0' 320 + 12 e0 320' - 4 320') + 12 kd1 (4 ace 50' - 5 ace 50 e0 + 2 e0' - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1' -12kd1 320¹) ⁴ - 24 (2 ace 50 - e0 - 2kd1) hd1 ⁴ (2 e0 ³ - 9 e0 ² 520 + 12 e0 320 ⁴ - 4 320³) + 12kd1 (4 ace 50 ² - 5 ace 50 e0 + 2 e0 ² - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 ⁴ (2 (-4 ace 50 to +6 ace 50 to t - 2 to t + 6 ace 50 to t d1 + 4 to t d1 + 10 to t d1 t + 8 ace 50 to 14 ace 50 to 5 to t 5 to t s to t d1 s 20 + 4 t d1 s 20 + 4 ace 50 s 20 to t d ace 50 s 20 to t d d1 s 20 to t d1 s 20 to 4 kd1 s20 + 4 ace 50 s20 t - 2 e0 s20 t - 12 kd1 s20 t) + 108 kd1 t (4 ace 50 t - 5 ace 50 e0 + 2 e0 - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 t - 4 ace 50 s20 + 2 e0 s20 + 6 kd1 s20) 6211 (2 ace50 - 60 - 2 kd1) ((2 (-4 ace50 e0 +6 ace50 e0 * - 2 e0 * +6 ace50 e0 kd1 - 4 e0 * kd1 +10 e0 kd1 * +8 ace50 * 320 - 14 ace50 e0 320 + 5 e0 * 20 + 2 e0 kd1 320 4 ace50 320 + 2 e0 320 + 6 kd1 320) (ace50 e0² + 4 e0² kd1 - ace50 e0 320 - 2 e0³ 320 - 7 e0 kd1 320 - 2 ace50 320³ + 5 e0 320³ - 2 kd1 320² - 2 320³) 216 (2 ace 50 - e0 - 2 kd1) kd1 (ace 50 e0 4 4 e0 kd1 - ace 50 e0 s 20 - 2 e0 820 - 7 e0 kd1 s 20 - 2 ace 50 s 20 4 5 e0 s 20 1 - 2 kd1 s 20 1 - 2 s 20 1 1 1) 17) 216 (2 ace 50 - a0 - 2 hd1) hd1 (ace 50 e0 4 e0 hd1 - ace 50 e0 320 - 2 e0 320 - 7 e0 hd1 320 - 2 ace 50 320 + 5 e0 320 - 2 hd1 320 - 2 320) + 216 (2 ace50 - e0 - 2 kd1) kd1 (ace50 e0 + 4 e0 kd1 - ace50 e0 s20 - 2 e0 s20 - 7 e0 kd1 s20 - 2 ace50 s20 + 5 e0 s20 - 2 kd1 s20 - 2 s20) +

-(-4 ace50" + 5 ace50 e0 - 2 e0" + 2 ace50 kd1 - 4 e0 kd1 + 2 kd1" + 4 ace50 s20 - 2 e0 s20 - 6 kd1 s20) / (2 ace50 - e0 - 2 kd1) * +

(2 (-4 ace 50' + 5 ace 50 e0 - 2 e0' + 2 ace 50 kd1 - 4 e0 kd1 + 2 kd1 * + 4 ace 50 s20 - 2 e0 s20 - 6 kd1 s20)

8 kd1 (ace50 e0² + 4 e0² kd1 - ace50 e0 s20 - 2 e0² s20 - 7 e0 kd1 s20 - 2 ace50 s20¹ - 5 e0 s20¹ - 2 kd1 s20³ - 2 s20³)) / (2 ace50 - e0 - 2 kd1)

(-4 ace 50 * e D + 6 ace 50 e O* - 2 e D² + 6 ace 50 e O kd1 - 4 e D* kd1 + 10 e O kd1 * - 4 e D* kd1 * - 8 ace 50 * 320 - 14 ace 50 e O \$20 + 5 e O* \$20 + 2 e O kd1 \$20 + 4 kd1 \$30 + 4 &d * 6 ace 50 \$20* - 2 e D \$20* - 12 kd1 \$20*) -

((-4 aceso e aceso eo e - 2 eu 3 e aceso eo kal - 4 eu kal + 10 eu kal 1 eu

24 (2 ace50 - e0 - 2 kd1) kd1 - (2 e0 - 9 e0 - 820 + 12 e0 920 - 4 920 *) + 12 kd1 (4 ace50 * - 5 ace50 e0 + 2 e0 * - 2 ace50 kd1 + 4 e0 kd1 - 2 kd1 * - 4 ace50 820 + 2 e0 920 + 6 kd1 920)

(ace50 e0² + 4 e0² kd1 - ace50 e0 s20 - 2 e0² s20 - 7 e0 kd1 s20 - 2 ace50 s20² + 5 e0 s20² - 2 kd1 s20² - 2 s20²))

4 / (-4 ace50+ 5 ace50 e0 - 2 e0 + 2 ace50 kd1 - 4 e0 kd1 + 2 kd1 + 4 ace50 a20 - 2 e0 a20 - 6 kd1 a20) / (4 (2 ace50 - e0 - 2 kd1) +) - 3 (2 ace50 - e0 - 2 kd1)

32" (2 ace50 - e0 - 2 kdl) (2 (- 4 ace50 e0 + 6 ace50 e0 t - 2 e0 t - 6 ace50 e0 kdl - 4 e0 t kdl + 10 e0 kdl t - 8 ace50 t 520 - 14 ace50 e0 s20 + 5 e0 t 520 + 2 e0 kdl s20 +

(2 e0'- 9 e0' s20 + 12 e0 s20' - 4 s20') - 144 (2 ace50 - e0 - 2 kd1) kd1 (-4 ace50 e0 + 6 ace50 e0' - 2 e0' + 6 ace50 e0 kd1 - 4 e0' kd1 + 10 e0 kd1 + 8 ace50 s s20 - 14 ace50 e0 s20 · 4kd1 * s20 + 4ace 50 s20' - 2 e0 s20' - 12 kd1 s20') * 108 kd1 (4 ace 50' - 5 ace 50 e0 + 2 e0' - 2 ace 50 kd1 + 4 e0 kd1 - 2 kd1 + 4 e0 kd1 - 2 kd1 + 50) *

5 eD 250 + 2 e0 kd1 320 + 4 kd1 320 + 4 kd2 50 320 1 - 2 eD 320 1 - 12 kd1 820 1 (2 e0 1 - 9 e0 1 320 + 12 e0 820 1 + 4 820 1) + 36 kd1 (4 8 e 850 40 + 2 e0 1 - 2 e 6 50 kd1 + 4 e0 kd1 2 x d11 - 4 ace 50 320 + 2 e0 s 20 + 6 x d1 s 20) (-4 ace 50 e0 + 6 ace 50 e0 ' - 2 e0' + 6 ace 50 e0 kd1 - 4 e0 kd1 + 10 e0 kd1 + 8 ace 50 s 20 - 14 ace 50 e0 a 20 + 5 e0' s 20 +

216 (2 ace50 - e0 - 2 kd1) kd1 (ace50 e0' + 4 e0' kd1 - ace50 e0 s20 - 2 e0' s20 - 7 e0 kd1 s20 - 2 ace50 s20' + 5 e0 s20' - 2 kd1 s20' - 2 s20') | | | | | | | | | | | | |

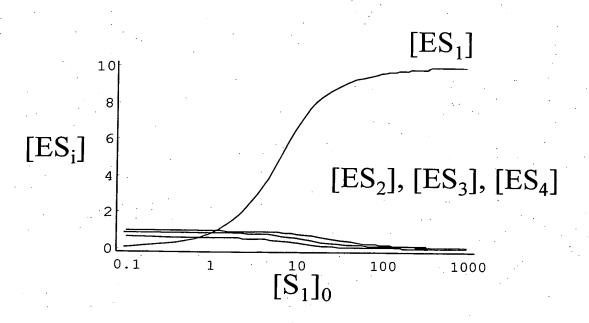
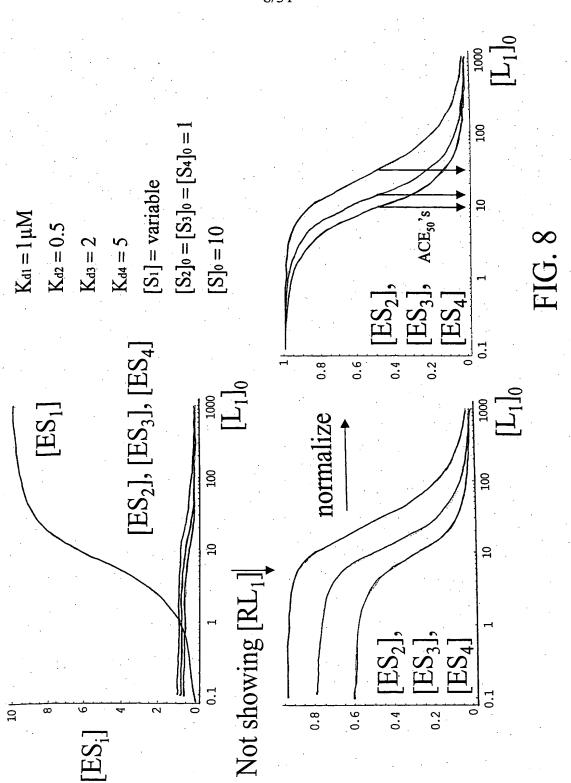
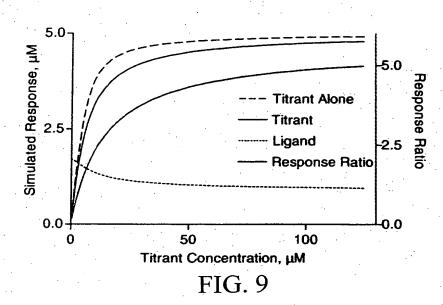


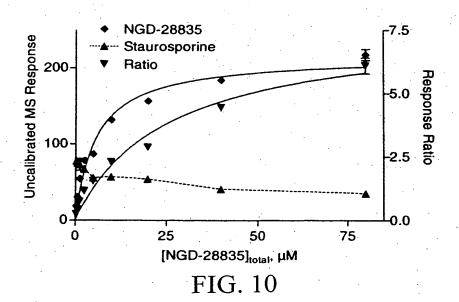
FIG. 7

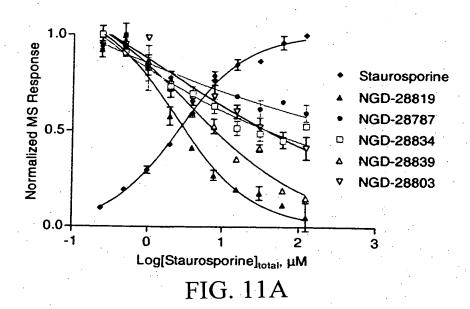
$$\begin{split} K_{\text{d1}} &= 1\,\mu\text{M} \\ K_{\text{d2}} &= 0.5 \\ K_{\text{d3}} &= 2 \\ K_{\text{d4}} &= 5 \\ [S_1] &= \text{variable} \\ [S_2]_0 &= [S_3]_0 = [S_4]_0 = 1 \\ [E]_0 &= 10 \end{split}$$

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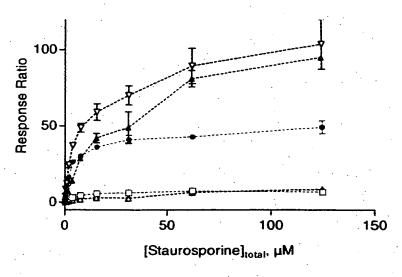
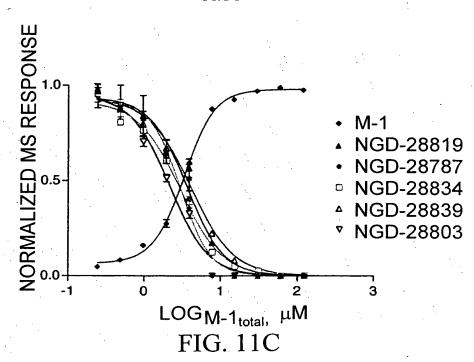
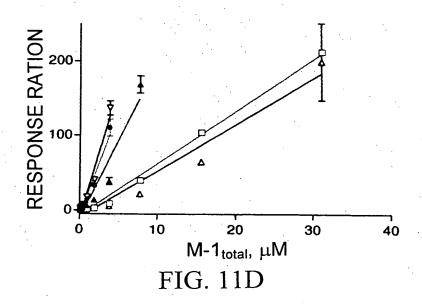


FIG. 11B







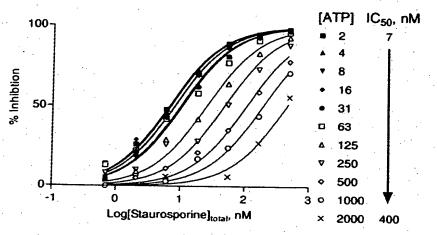


FIG. 12A

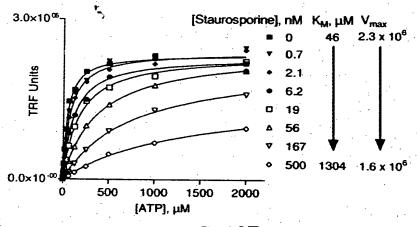
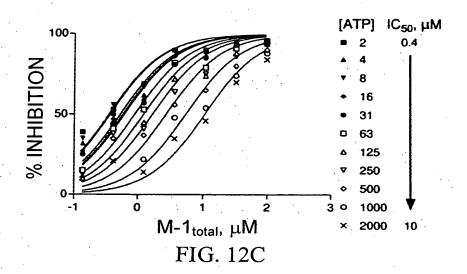
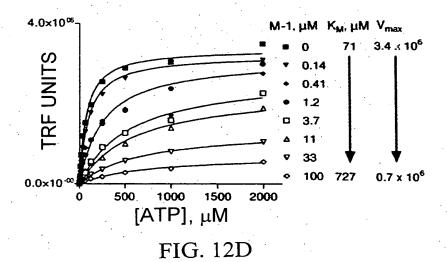
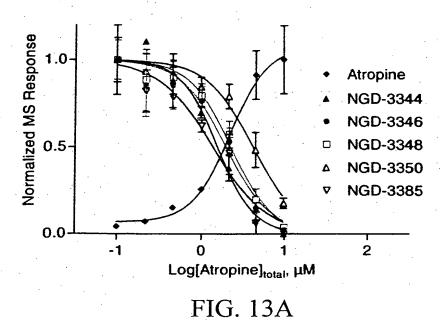


FIG. 12B





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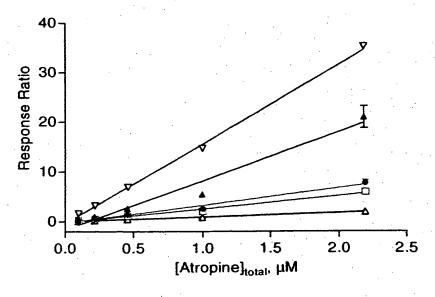
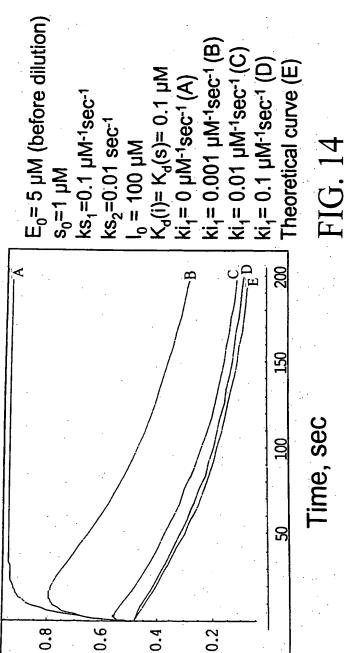
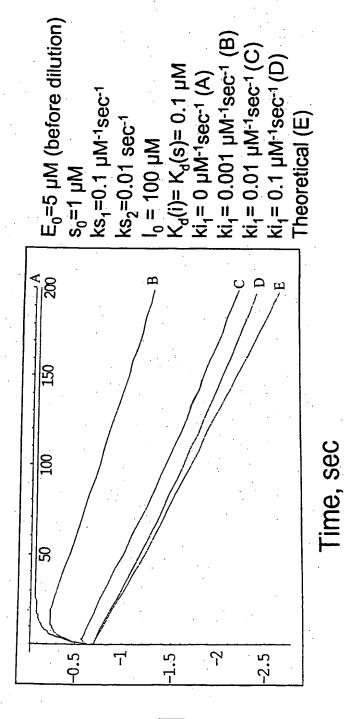
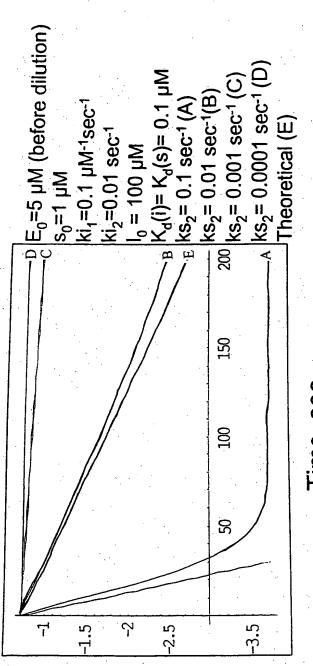


FIG. 13B



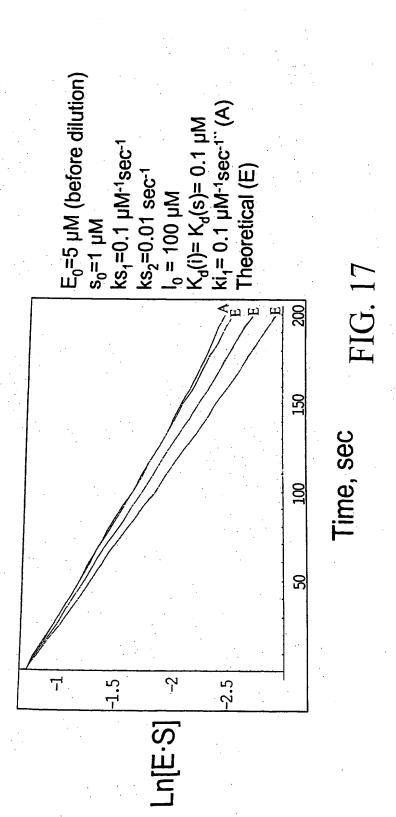


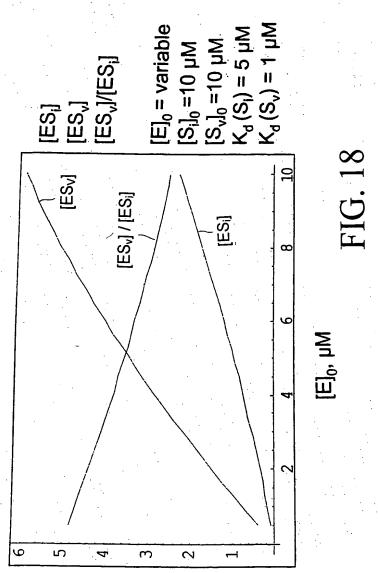




Fime, sec

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[E2¹], [ES₂]¹ [ES₁]

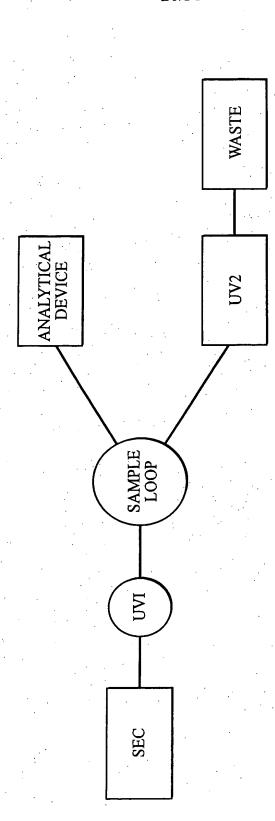


FIG. 19

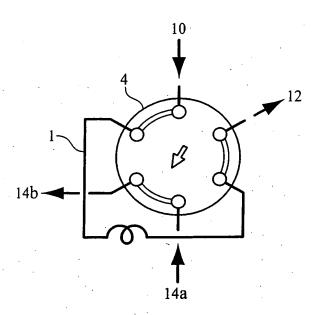


FIG. 20A

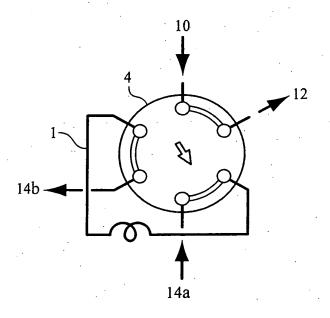
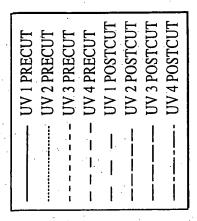
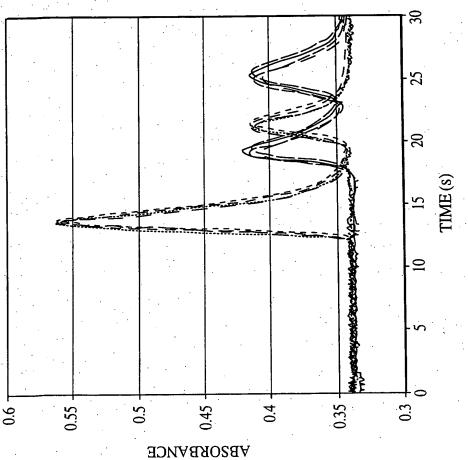


FIG. 20B





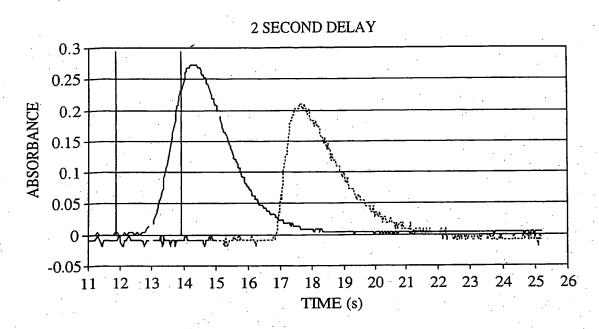


FIG. 22A

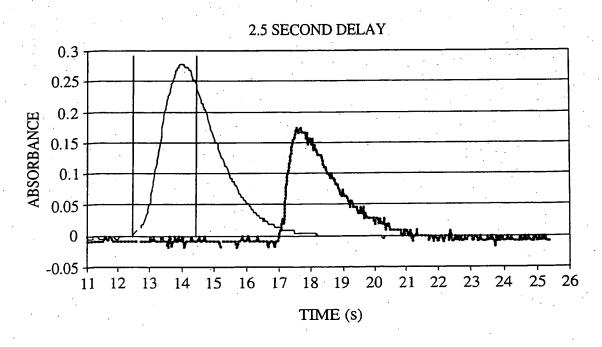


FIG. 22B

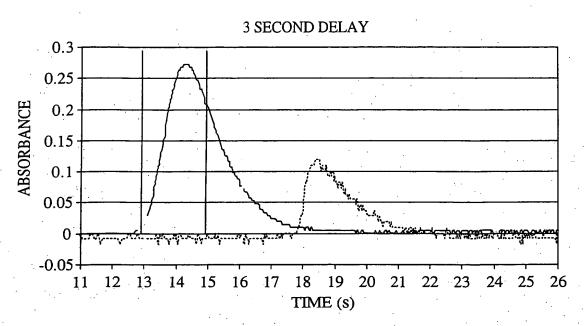


FIG. 22C

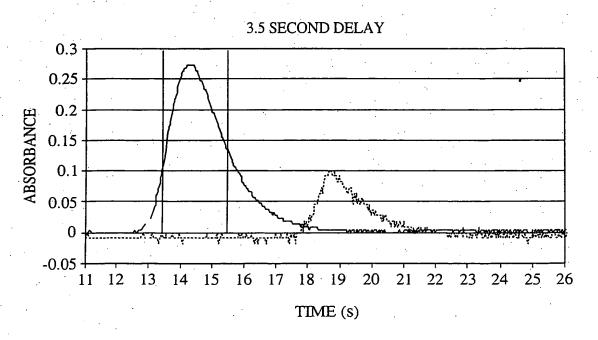


FIG. 22D

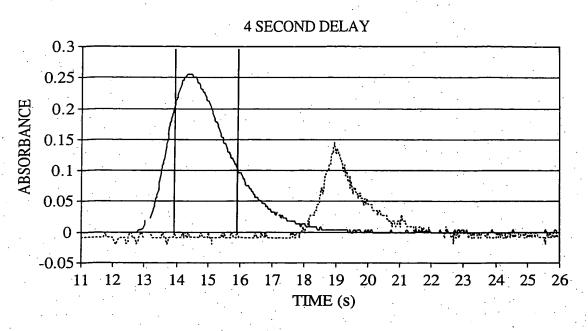


FIG. 22E

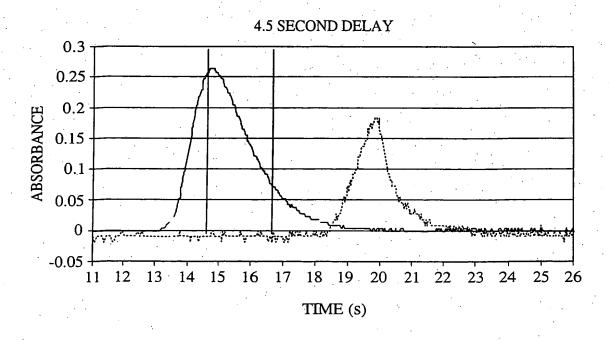
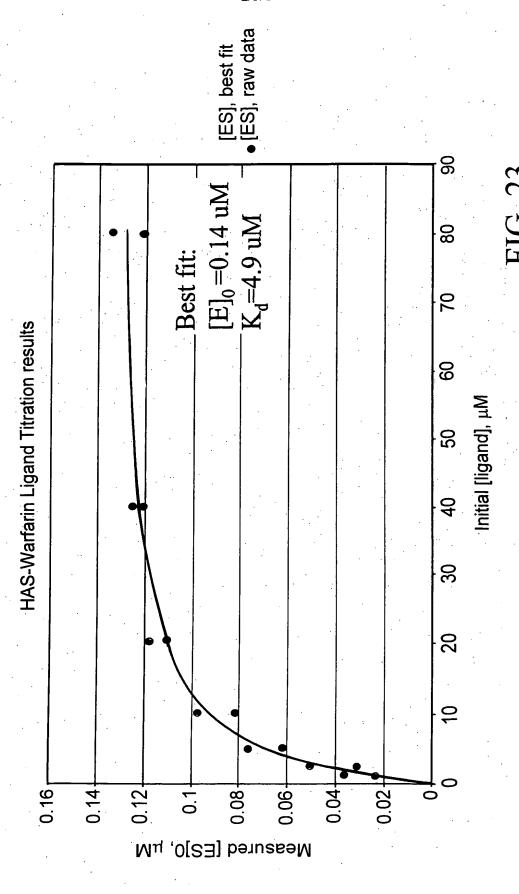


FIG. 22F

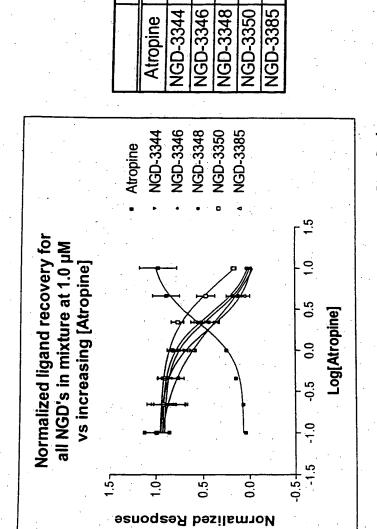




ACE50,

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2.6 2.7

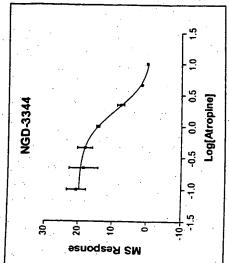


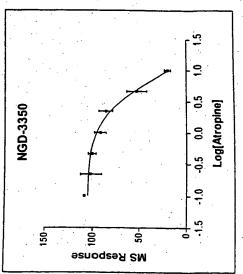
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Comparison of NGD-3344 (weak) and NGD-3350 (strong) ligands shown

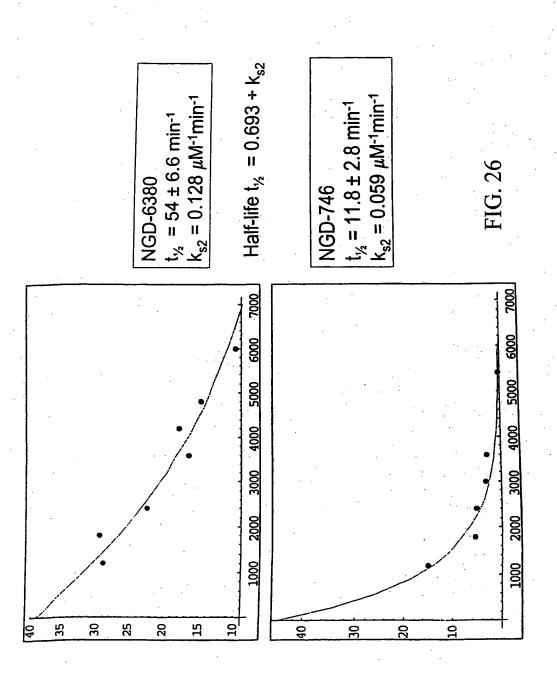
from $A\overline{CE}_{50}$ given K_d of inhibitor (0.010 μ M) & protein concentration = K_d of ligands in mixture calculated

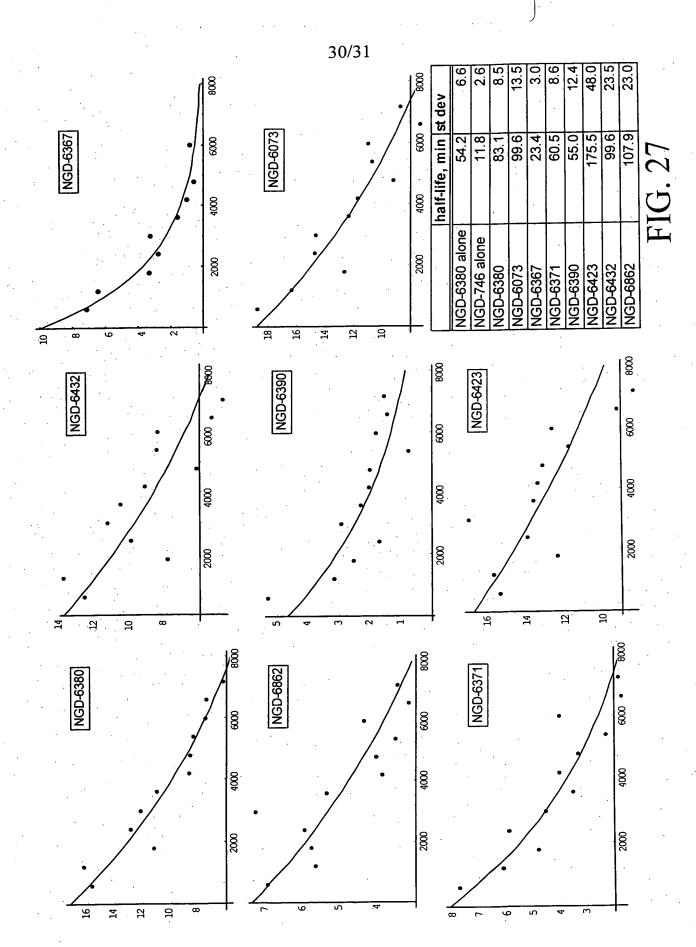
	ACE50, µM	Ка, µМ
NGD-3344	1.8	0.75
NGD-3346	2.6	0.20
NGD-3348	2.7	0.19
NGD-3320	7.1	0.03
NGD-3385	2.3	0:30





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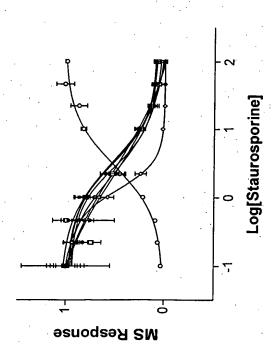


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	ACE50, µM K	Kd, nM
NGD-6380	3.27	27
NGD-6862	p/u	
NGD-6371	3.03	30
NGD-6432	1.93	53
NGD-6390	3.04	29
NGD-6423	2.69	34
NGD-6367	2.44	39
8209-Q5N	1.93	52
NGD-746	0.58	200

FIG. 28

Staurosporine



NGD-6390 NGD-6423 NGD-6367 NGD-6073 NGD-746

Normalized NGD-XXX Response